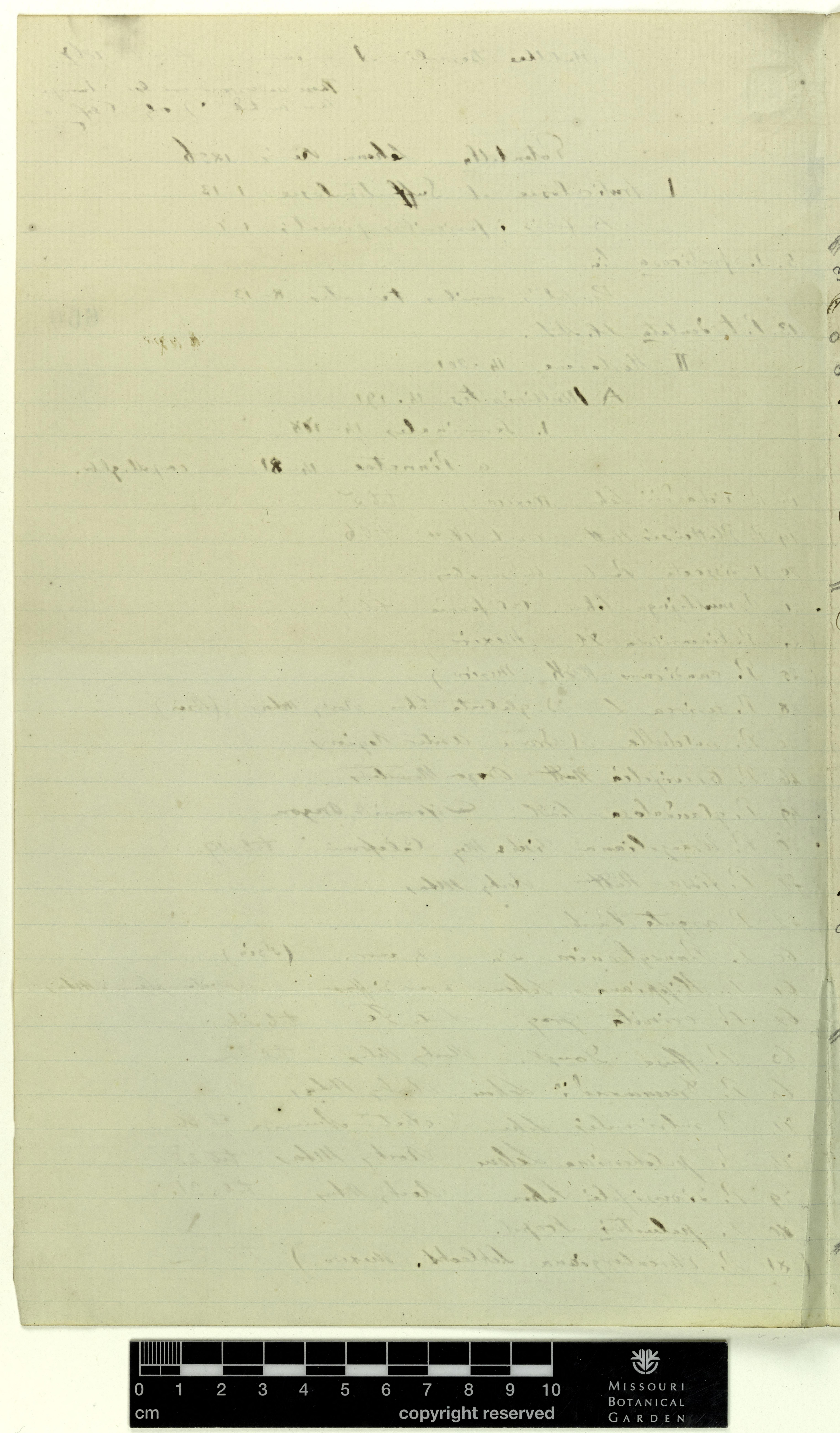


2 186g Potestille Boreli's Amira Those wasters roved one Is i lampe Then with () only i Cilifer or Organia Stentille Lehman Rivis. 1856 I Frationles et Suffrationlesse. 1-13 A folis inferioribus pinnetis. 1-7 5. S. frutirosa dien B. poliis omnibus terratis 8-13 650 13. P. tridentate Sel. A.L. II. Herbarene 14-201 A. Mulliripites 14. 191 1. Termineles 14-188 a l'innatae 14-81 compell, glabe. (16 P. Richardi Lehn. Mexico) tat 5 19 P. Plattensis Mitt: On the Plett 20 Phisects blank, Hudsons by . 21 1. multijuga Sohn. Celifornia (24 I'. lineaniloba DC. Mexero) (25 1. candioans HOSK Mexico) 28 P. serirea L D. glebrita Schu Rocky Mhrs (Asin) 30 9. pulchella A More anti-Regions 46 1. Erevifelea Matt Orogon Mountains . 49 1. glandalosa Lidt. Geiforni & Orgon . 50 P. Wazeliana Fisch & Mey Celeforni tat.19. 57 1! fissa Rutt - Rocky mela, 52 I! argute Punh 60 P. Vennaylvanira Lin 2 van. (4309) Westinglaning 2 Milan 61 1. Hippiana Sehon 2 van differen .62 1? crinita grag Lit. Le tut. 21. 63 Maffesa Dougl. Rocky Mily tel 22. be I. Drummendi dekni Antes Males 71 0! subsiranlej Lehen obsetti-America tot 30 Mocky May tot 28 74 / pulchemina delen. 79 1! Diversifoler Lehm Mocky Mhy Z.6, 31. 80 1. pulustir Scopol. 181 P. Chrenbergiana Schlecht. Mexico) Fre 32 MISSOURI

BOTANICAL

GARDEN

copyright reserved



Il Herbarcae A Mulhiripiles 1. Ler minales b. Digitalae 82-145 * Corpelles glabris 82-135 85 S. olopetala Turoz (fastigiata Mitt. Town of .) Rocky Mit, (then 295 T. Nuttallei Lehn (nigida Mott. Finser.) wester places & Make, Mel. 1991! Theuberi Gry 1 Mexcro 0104 d'argenter L. 101 P. digitato-flebellata Abdmun. Amen. bon unde? near Monregura . 113 V. Blaschkeana Tung Aussian America tato 64 . 114 d. graviles Dougl. Oregon 115 1! flabelliformir deha. (gnoilir B. Torofo.) deskelshavn. (117 0. heematorhus Lehrer. - Mexico) 2039 (118 !! Comarvides #68k Mexico) 120 P. consinna Richard & S. humifuga (P. humifuga MH) · (121 0. Ceptopetala Lehan. Mexico) tel 43 (131 P. samuruloises AGSA Maxito) (148 P. ovalij Lehn Muxito) XX. Compeller villoser 136-145 c. Ternatae 146-178 * Carpellis polosis slavetis 146. (148 9. ovalis Lehm Mexiko) tob. 50. XX Carpeller glebris 155-178 . 160 !! flebelli folen Mook. Degon til 51 0 167 P. minima Hell fit B. Robbiasiana Tonego, White Mountage 170 %. emargineta lank dabrader te (te Taysburger) 172 1. Hookeriana Schon. Am sept. "At 55 174 1! mivea L. Aok, Mhu 175 P. Vahliana Lehen (P. nivea z. Im 19,) antis Aug. The 176 P. villosa Pell antis Augin, & northwest court in 2. Axilliflorne 179-191 185 P. procumber S.Elf Am gict. Premonle; Kestt. # 189. M. Canadeus jal p 1900/ auxenina MISSOURI

BOTANICAL

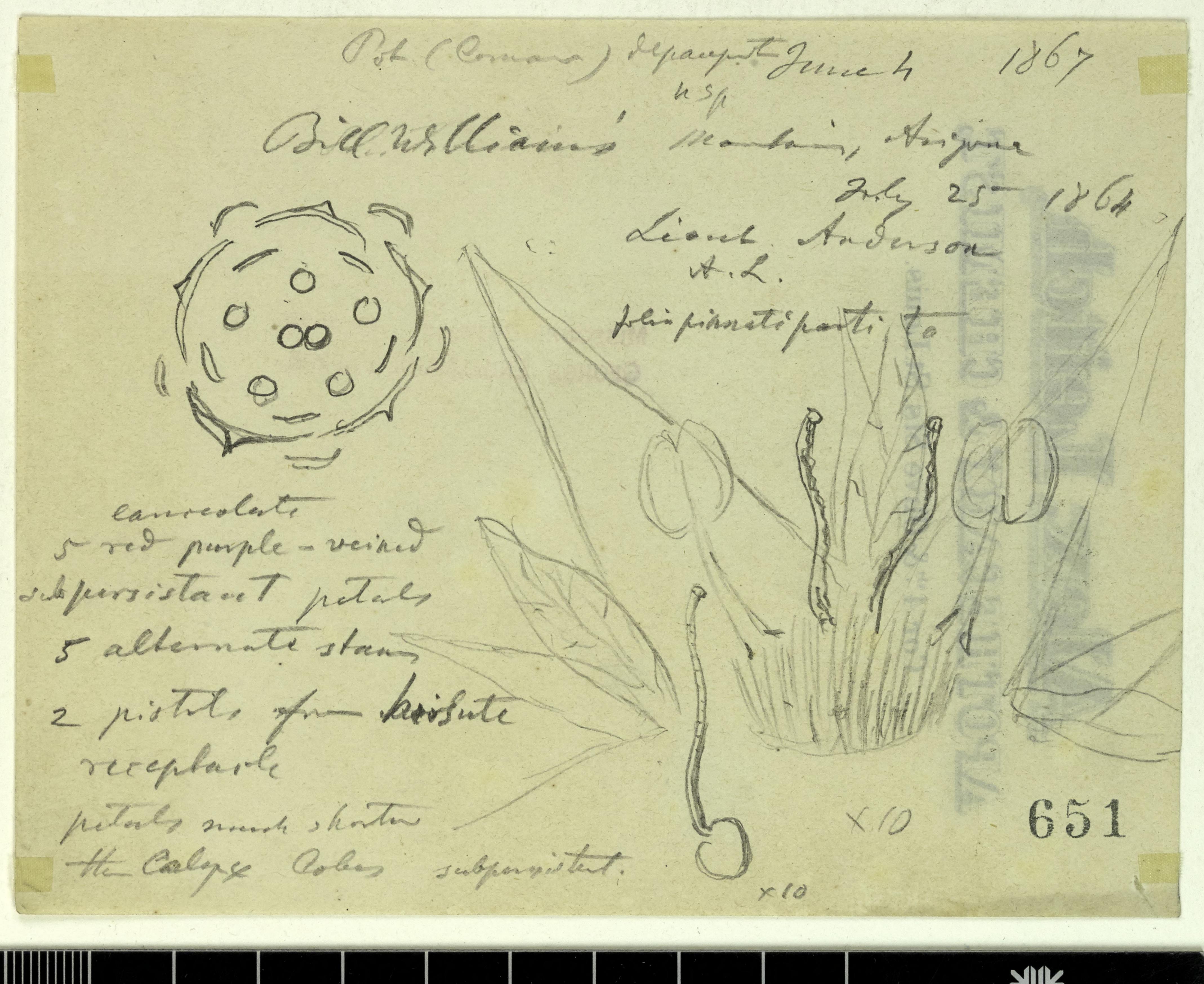
GARDEN

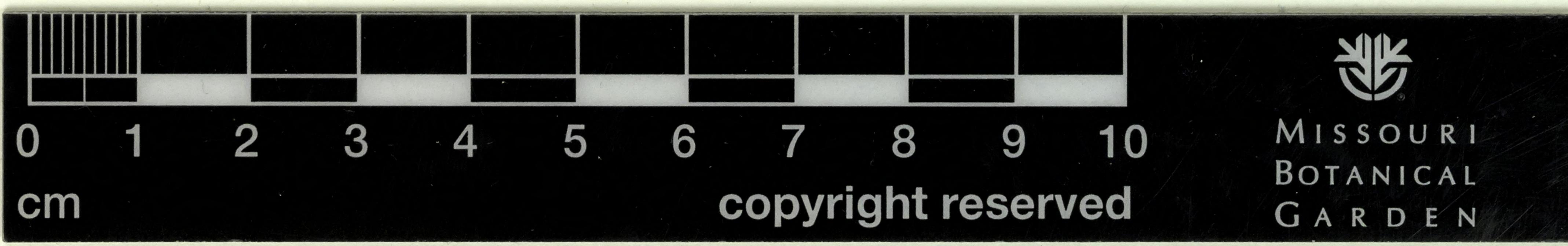
copyright reserved

cm

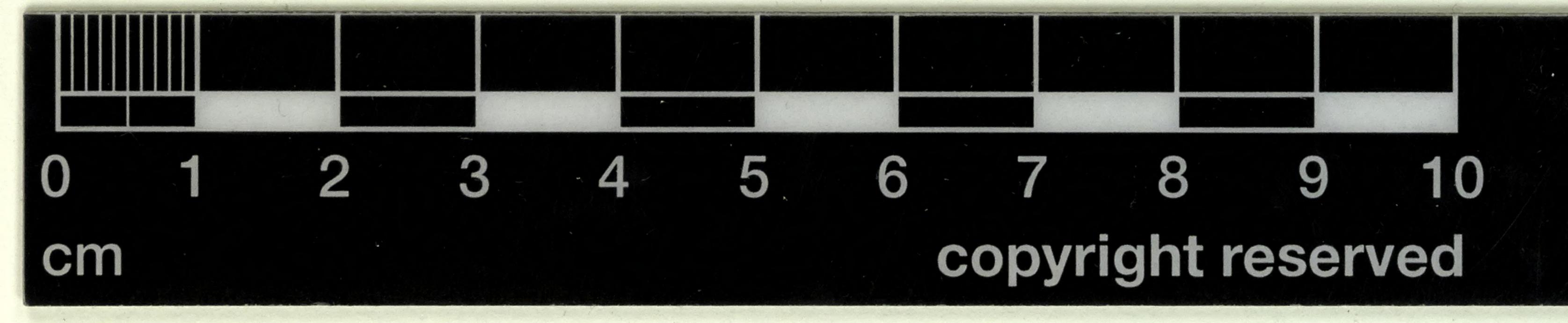
Il Herbarere B. Arephelee 192-201 a Vimatae 192-197 Le 62 13 195 / parndox e Kutt. sursissippe velleg 1/20/0/. Mocky May 1970! nivalig MuSt. b. Digitate 198 9 198. I! pentanda Engel Alkanson tit 62 f. 4. c Ternatae 199-201 199. 1. Nonvegira 200 P. Labradonia Lehm g 201 P. Millegrane Cog Stadowi 46 A 10 Mexic 10 speni Castevard or Mirroghot the north 2 Meisensmippi velleg Marger Antier Regions or Lebender Eliforne: tothe North west Coast emknown xx 18 Nocky Mount, I plan at The base 16 speries of these 11 also orran - Curope as atte vi lange and Asca 10 spenis - Mexico MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS MISSOURI BOTANICAL copyright reserved

GARDEN





MISSOURI BOTAMICAL GARDEN GEORGE ENGELMANN PAPERS





LEAD AND A CONTRACT OF THE PROPERTY OF THE PRO

Canal monday of the Comment of the C

Editorial Department.

A CONTRACTOR OF THE CONTRACTOR

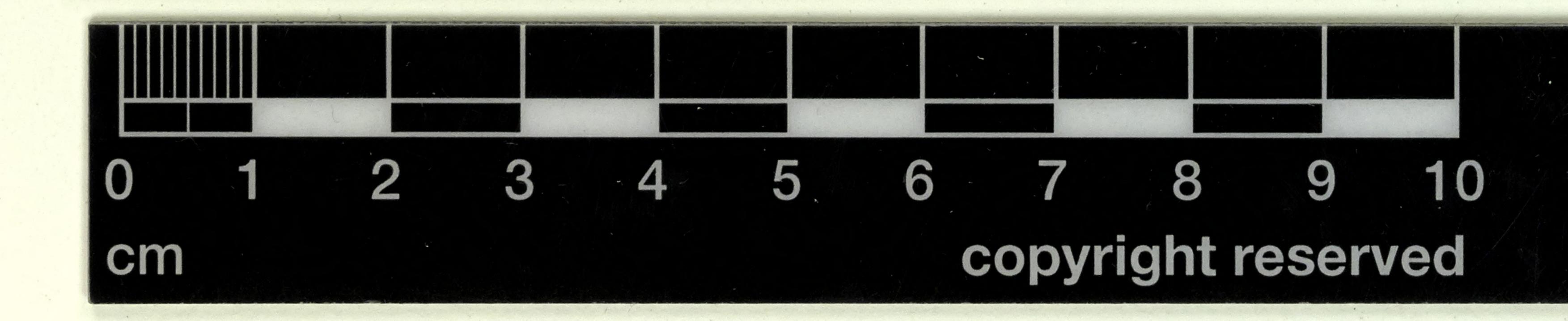
REVIEWS AND BIBLIOGRAPHICAL NOTICES.

PAGET'S SURGICAL PATHOLOGY.

[Continued.]

Mr. Paget embraces in his theory the doctrine of complemental nutrition, first taught by C. F. Wolff, illustrating the subject as follows:

"A great change in nutrition rarely takes place in a single organ at a time; for example, the growth of the beard at the period of puberty in man, the growth and perfection of the plumage of the bird at breeding time; but as in man, when the development of the genital organs is prevented, that of the beard and all other external sexual characters is, as a consequence, hindered, so in birds, when the breeding season ends, and the sexual organs pass gradually into their periodic atrophy, at once the plumage begins to assume the pale and more sober colors, which characterizes the barrenness of winter." He next refers to certain interesting specimens presented to the museum by Sir Philip Egerton, showing the interesting fact, "that if a buck be castrated while his antlers are still covered with velt, their growth is checked, they remain as if truncated, and irregular nodules of bone project from their urfaces." "The fact is not, hitherto, explained; it is inexplicable, by believing that the materials which, in the formation of these organs of external sexual character, are removed from the blood, leave or maintain the blood in the state necessary for the further development, growth and active function of the proper sexual or reproductive organs." "The concurrent development of the thymus gland and air breathing organs during the body's growth of the thyroid gland and the brain, (instances





SCIENTIFIC DEPARTMENT.

2.—Monthly Mean of Temperature, Fahrenheit.

JANUARY.

YEAR.	6 A. M.	9 A. M.	12 M.	3 P. M.	6 P. M.	9 P. M	MEAN OF MONTH
1861	26.9	29.5	35.3	37.4	33.5	30.8	32.5
1862	27.1	27.3	30.1	30.7	29.5	28.5	28.9
1863							
1864	22.6	25.2	32.6	35.1	31.5	28.0	29.5
1865		24.2					28.
1866		29.1		36.8		31.5	32.5
Mean	26.2	28.2	33.9	35.7	32.8	30.5	31.
	FEB	RUAR	Υ.				
1861	34.2	35.4	43.7	46.7	42.8	39.7	40.4
1862	23.9	27.0	33.6	35.9	31.9	29.2	30.5
1863	31.3	33.7	38.7	39.4	36 6	34.4	35.
1864	30.4	34.4	42.2	45.5	40.9		1
1865	33.4	36.1	41.7		39.4	36.8	1 00.
1866	27.3	30.0	37.0	38.7	35.2	32.5	33.4
Mean	30.1	32.8	39.5	41.6	37.8	34.8	36.1

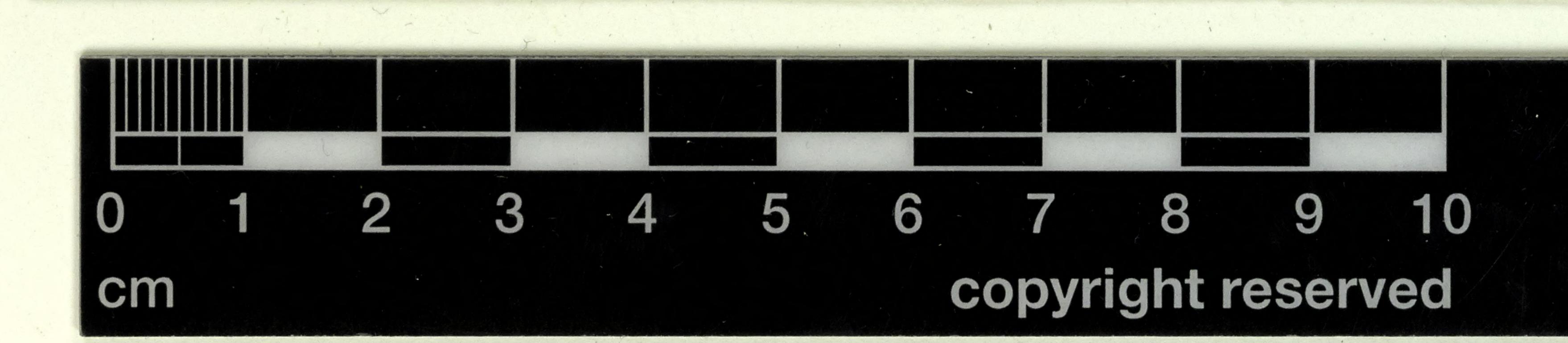
3.—Monthly Mean of Relative Humidity.

JANUARY

	JAN	UARY					
YEAR	6 A. M.	9 A. M.	12 m.	3 P. M.	6 P. M.	9 P. M.	MEAN OF MONTH.
1861. 1862. 1863. 1864. 1865. 1866.	91.5 94.1 90.8 89.3 87.1	87.5 83.9 79.3 77.5 77.1	78.5 75.0 65.9 64.3 67.2	62.7 62.8 65.3	75.4 73.7 74.6	79.8 79.9 79.1	
Mean	90.6	81.1	70.2	68.3	77.6	82.9	77.4
	FEB	RUARI	7.				
1861	89.1 94.1 79.0 86.2 85.3	79.2 83.9 65.0 73.8 70.8	65.8 75.0 53.5 63.7 62.9	61.5 71.9 49.0 60.8 59.5	72.2 79.3 59.9 70.8 68.6	75.5 86.0 76.7 76.5	73.9 81.7 62.7 72.0 70.6
Mean	86.8	74.5	64.2	60.5	70.2	76.9	70.7

Errata. In the last No. of Journal, on page 70, line 6, for the word "destination" read declination.

MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS





Lice and the second second

Millian monorables

Editorial Department.

production of the state of the

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

PAGET'S SURGICAL PATHOLOGY.

[Continued.]

Mr. Paget embraces in his theory the doctrine of complemental nutrition, first taught by C. F. Wolff, illustrating the subject as follows:

"A great change in nutrition rarely takes place in a single organ at a time; for example, the growth of the beard at the period of puberty in man, the growth and perfection of the plumage of the bird at breeding time; but as in man, when the development of the genital organs is prevented, that of the beard and all other external sexual characters is, as a consequence, hindered, so in birds, when the breeding season ends, and the sexual organs pass gradually into their periodic atrophy, at once the plumage begins to assume the pale and more sober colors, which characterizes the barrenness of winter." He next refers to certain interesting specimens presented to the museum by Sir Philip Egerton, showing the interesting fact, "that if a buck be castrated while his antlers are still covered with velt, their growth is checked, they remain as if truncated, and irregular nodules of bone project from their urfaces." "The fact is not, hitherto, explained; it is inexplicable, by believing that the materials which, in the formation of these organs of external sexual character, are removed from the blood, leave or maintain the blood in the state necessary for the further development, growth and active function of the proper sexual or reproductive organs." "The concurrent development of the thymus gland and air breathing organs during the body's growth of the thyroid gland and the brain, (instances





ELÆACRINUS KIRKWOODENSIS, n. sp.

Body very small, subglobose, a little longer than wide, flattened above and below. Basal pieces very gently concave, with their edges on a level with the plane of the under side. Radial pieces (fork pieces) reaching to the base and occupying more than four fifths the entire length of the body, narrow below and widest in the middle, sides gently arched. Interradial pieces subdeltoid, very prominent towards the apex, much longer than wide, obtusely angulated below, acutely angulated above, and notched on either side a short distance below the summit. Pseudo-ambulacral areas extending from base to summit, narrow, deeply impressed; sides nearly parallel; pore pieces amounting to about fifty in each field. A longitudinal fissure or slit extends from the central summit opening downwards, separating the pore pieces of one side from their fellows of the opposite for the distance of about one fifth the length of the field, thence their inner edges are united in the median line to the base. Pseudo-ambulacral spaces lanceolate, sloping gently from their edges to the sutures. Ovarial apertures eight, very minute, situated at the notches of the interradial plates. Analopening large, circular or very slightly elliptical. The surface markings are not plainly exhibited in any of the specimens I have collected of this species. On several of them I observe, more or less distinctly, irregular coarse rugæ or pittings, which, however, may be due to weathering.

Dimensions.—Length, 0.20 of an inch; width, 0.18.

The Eleacrinus Kirkwoodensis is nearly allied to E. (Pentremites) melo, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

aftilit tilet bred i frem frittiget attentime med territiget statistich

为社会,对社会的社会的社会。这个人的一句的,是是这种的教育的社会的社会的社会的社会的社会的社会的社会的社会。

There were a rest by the wife of the some the some that the second the second to

There is a rest the training of the state of the court of

the elight much broken kinder at most at midaliza unitalit.

Constant distriction tennessistem entiretentation of the distriction of the second of

MISSOURI BOTANICAL GARDEN

the military dot'll be greatered grant and be within an analytic and the

8

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved



Topaz in Utah. By HENRY ENGELMANN.

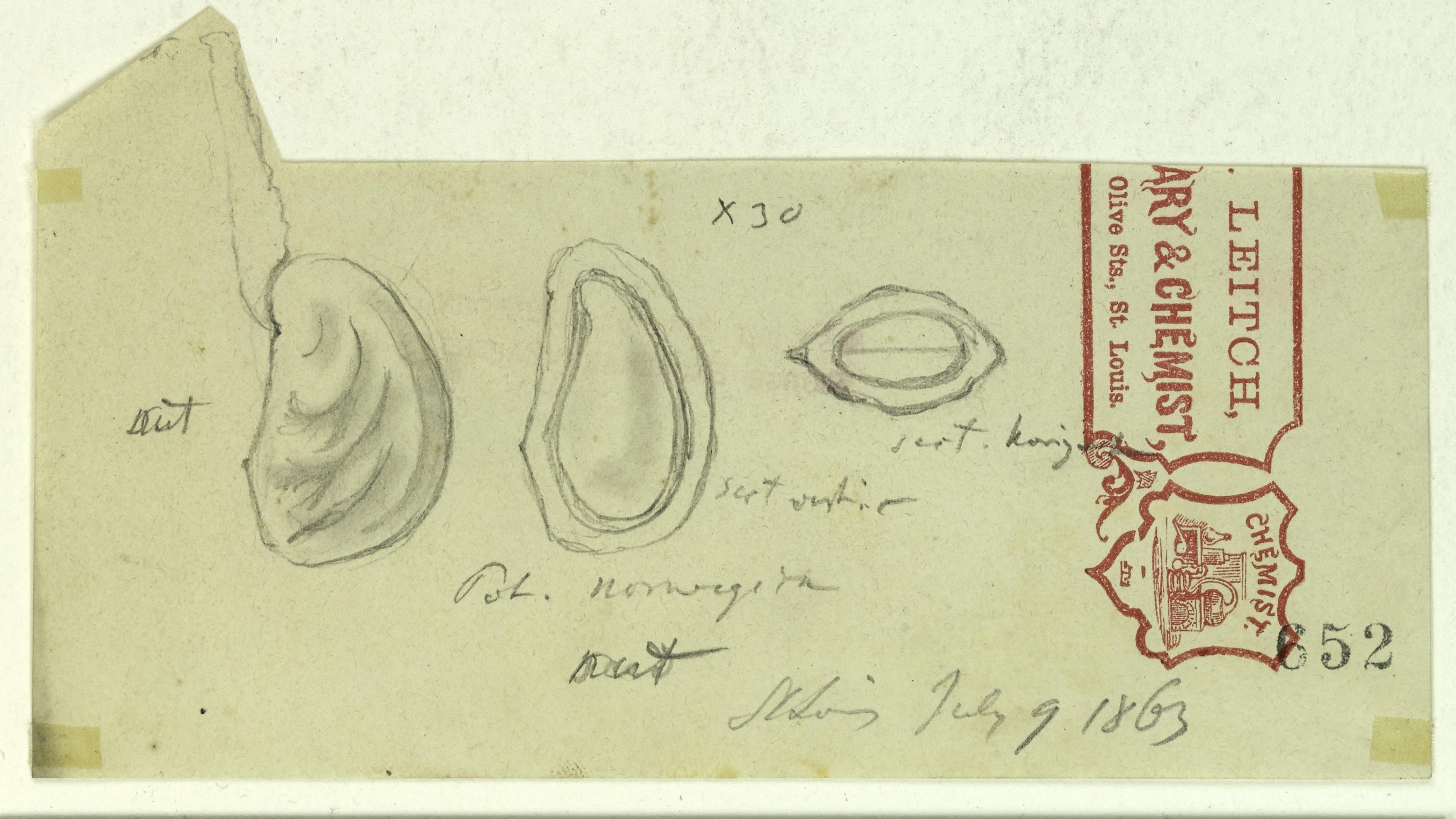
During my explorations in Utah as Geologist of the Expedition under Capt. J. H. Simpson, Top. Eng'rs. U. S. A., in 1858 and 1859, I observed some remarkably beautiful crystals of Topaz among some detritus of trachytic porphyry. They were perfectly colorless, transparent, sharply developed, and of great lustre. They were all short columnar. The largest of them measured scarcely one third of an inch in the direction of the basal cleavage, which was highly perfect. I observed ten modifications: all crystals exhibited (according to Prof. Rose's designation)

 $\infty c : b : a$, $\infty c : b : 2a$, $c : \infty b : \infty a 1$, $4 c : b : \infty a$, 2 c : b : a ; c : b : a ; a few only $2 c : \infty b : a$, and 4 (?) c : b : a .

As in none of the crystals were both ends developed, I could not ascertain whether they were hemihedral, as is most common with topaz. The hardness of the mineral is =8. It is infusible before the blowpipe; and when strongly heat ed is coated with small blisters, but does not show any change of color. It exhibits the reactions of fluorine, alumina, and silex. No tests were made for other elements, nor were the crystals examined in regard to pyro-electricity and polarization of light. They exhibit double refraction quite plainly.

The locality of the mineral is near lat. 39° 40′, long. 113° 30′ west of Greenwich, west of south of Salt Lake, in Thomas' range of mountains, on Capt. Simpson's return trail. Circumstances prevented me from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.









SCIENTIFIC DEPARTMENT.

2.—Monthly Mean of Temperature, Fahrenheit.

JANUARY.

YRAR.	6 A. M.	9 A. M.	12 m.	3 P. M.	6 P. M.	9 P. M	MEAN OF MONTH.
1861	26.9	29.5	35.3	37.4	33.5	30.8	32.2
1862	27.1	27.3	30.1	30.7	29.5	28.5	28.9
1863	31.9	34.0	39.4	41.2	38.3	36.1	36.8
1864	22.6	25.2	32.6	35.1	31.5	28.0	29.2
1865				33.1			28.1
1866	27.0	A STATE OF THE PARTY OF THE PAR					32.2
Mean	26.2	28.2	33.9	35.7	32.8	30.5	31.2
	FEB	RUAR	Y.				
1861	34.2	35.4	43.7	46.7	42.8	39.7	40.4
1862			33.6	35.9	31.9	29.2	30.2
1863	31.3	33.7	38.7	39.4		34.4	35.7
1864	30.4	34.4	42.2	45.5	40.9	36.4	38.3
1865	33.4	36.1	41.7	43.3	39.4	36.8	38.4
1866	27.3	30.0	37.0	38.7	35.2	32.5	1
Mean	30.1	32.8	39.5	41.6	37.8	34.8	36.1

3.—Monthly Mean of Relative Humidity.

JANUARY.

YEAR	6 A. M.	9 A. M.	12 м.	3 р. м.	6 P. M.	9 P. M.	MEAN OF MONTH.
1861				• • • • • • • •		• • • • • • • •	72.2
1862	94.1	83.9	75.0	71 9	793	86.0	85.3
1864	90.8	79.3	65.9	62.7	75.4	79.8	75.6
1866	87.1	77.1	67.2	65.3	74.6	79.9	74.6
Mean	90.6	81.1	70.2	68.3	77.6	82.9	77.4

FEBRUARY.

1861. 1862. 1863. 1864. 1865.	89.1	79.2	65.8	61.5	72.2	75.5	73.9
	94.1	83.9	75.0	71.9	79.3	86.0	81.7
	79.0	65.0	53.5	49.0	59.9	70.0	62.7
	86.2	73.8	63.7	60.8	70.8	76.7	72.0
1866						76.5 76.9	

Errata. In the last No. of Journal, on page 70, line 6, for the word "destination" read declination.

SEORGE ENGELMANN PAPER

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved

MISSOURI BOTANICAL GARDEN

Editorial Department.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

PAGET'S SURGICAL PATHOLOGY.

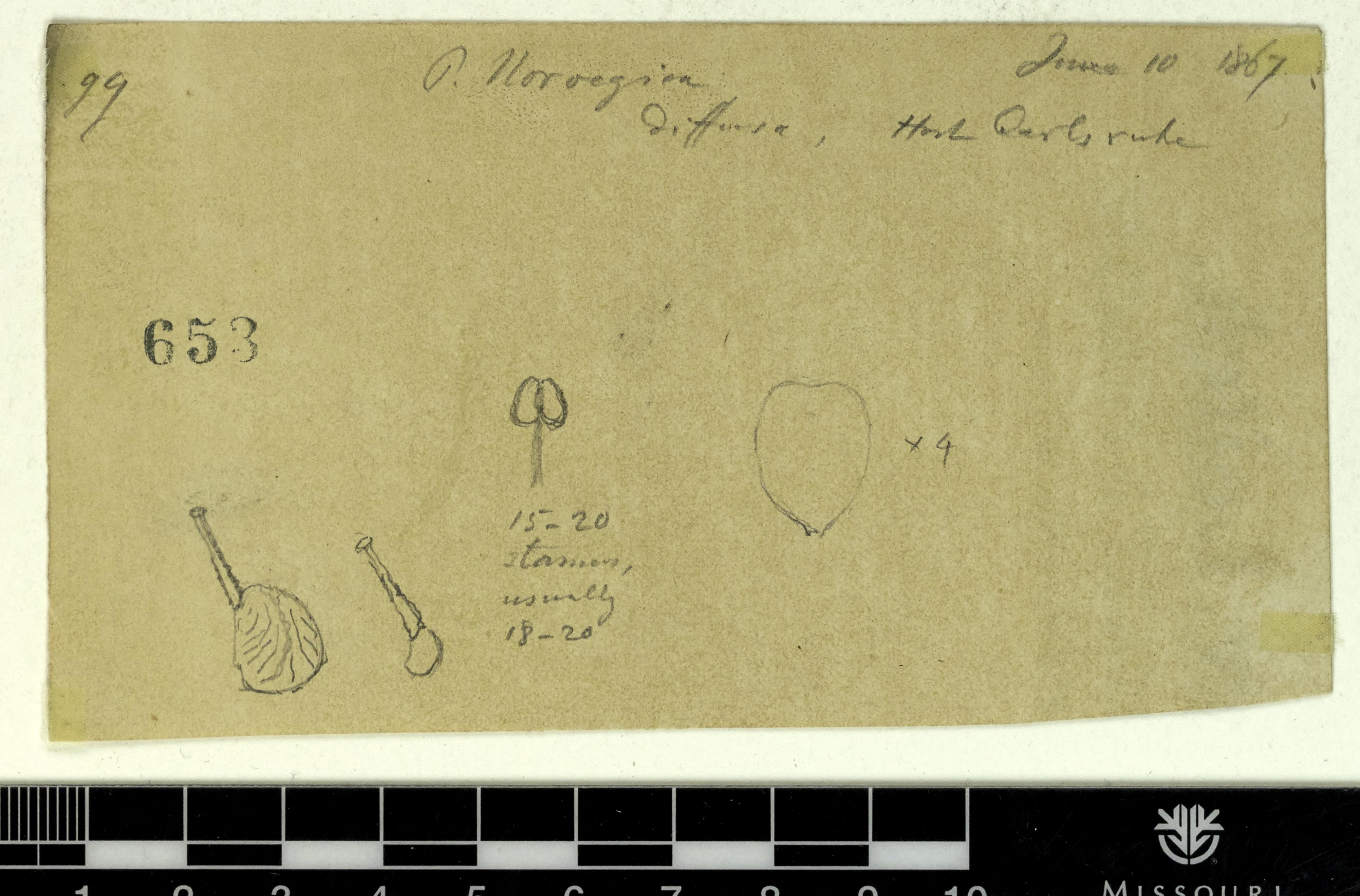
[Continued.]

Mr. Paget embraces in his theory the doctrine of complemental nutrition, first taught by C. F. Wolff, illustrating the subject as follows:

"A great change in nutrition rarely takes place in a single organ at a time; for example, the growth of the beard at the period of puberty in man, the growth and perfection of the plumage of the bird at breeding time; but as in man, when the development of the genital organs is prevented, that of the beard and all other external sexual characters is, as a consequence, hindered, so in birds, when the breeding season ends, and the sexual organs pass gradually into their periodic atrophy, at once the plumage begins to assume the pale and more sober colors, which characterizes the barrenness of winter." He next refers to certain interesting specimens presented to the museum by Sir Philip Egerton, showing the interesting fact, "that if a buck be castrated while his antlers are still covered with velt, their growth is checked, they remain as if truncated, and irregular nodules of bone project from their surfaces." "The fact is not, hitherto, explained; it is inexplicable, by believing that the materials which, in the formation of these organs of external sexual character, are removed from the blood, leave or maintain the blood in the state necessary for the further development, growth and active function of the proper sexual or reproductive organs." "The concurrent development of the thymus gland and air breathing organs during the body's growth of the thyroid gland and the brain, (instances

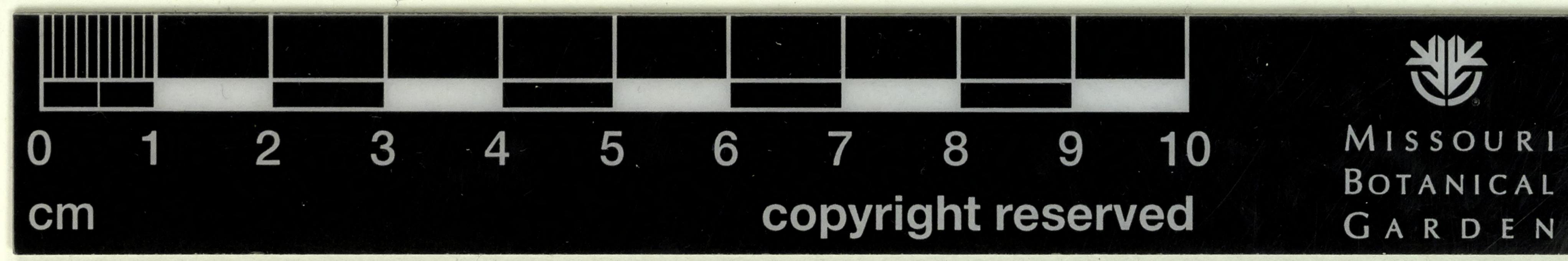


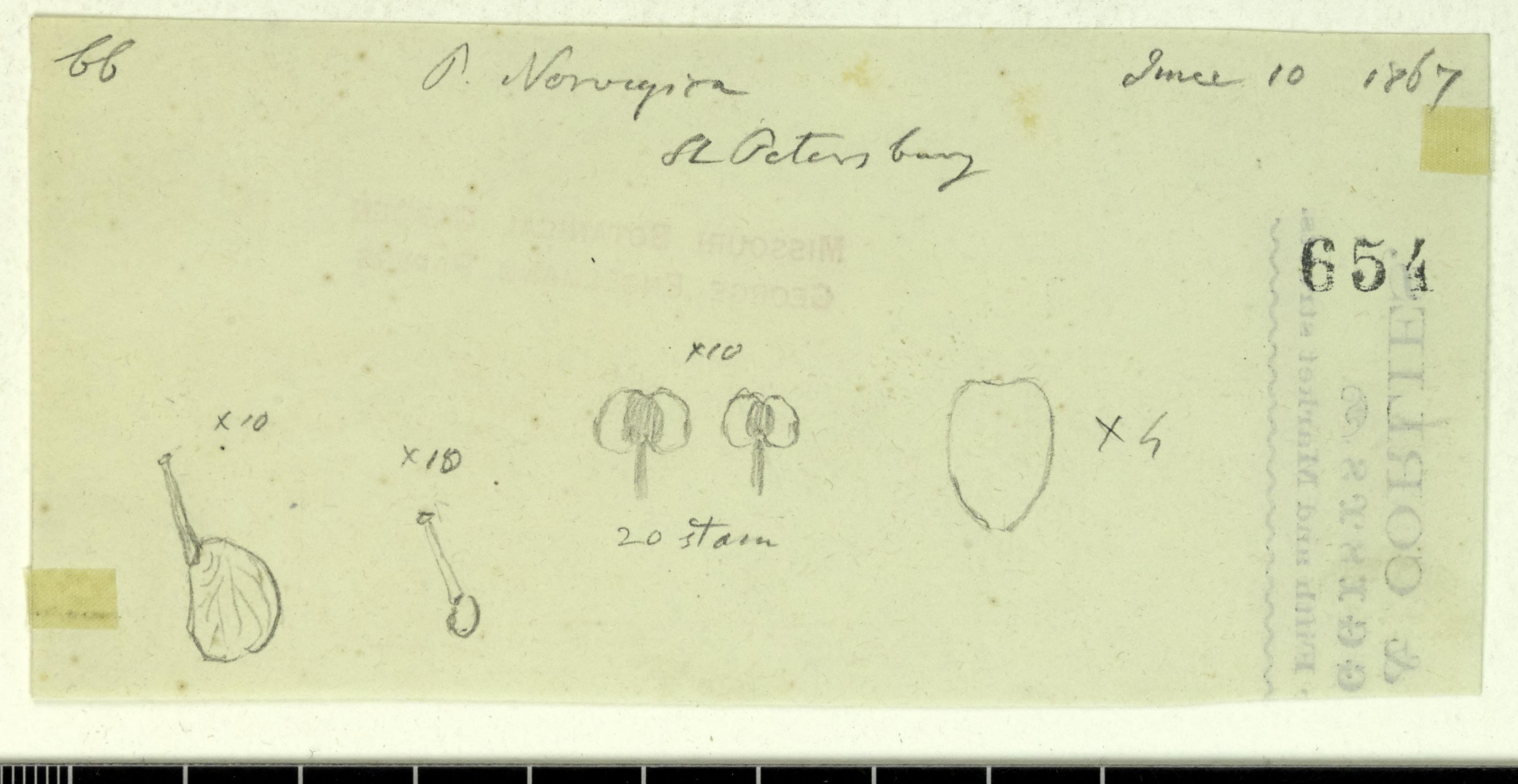






MISSOURI BOTANICAL CARDENS GEORGE ENGELMANN PAPERS

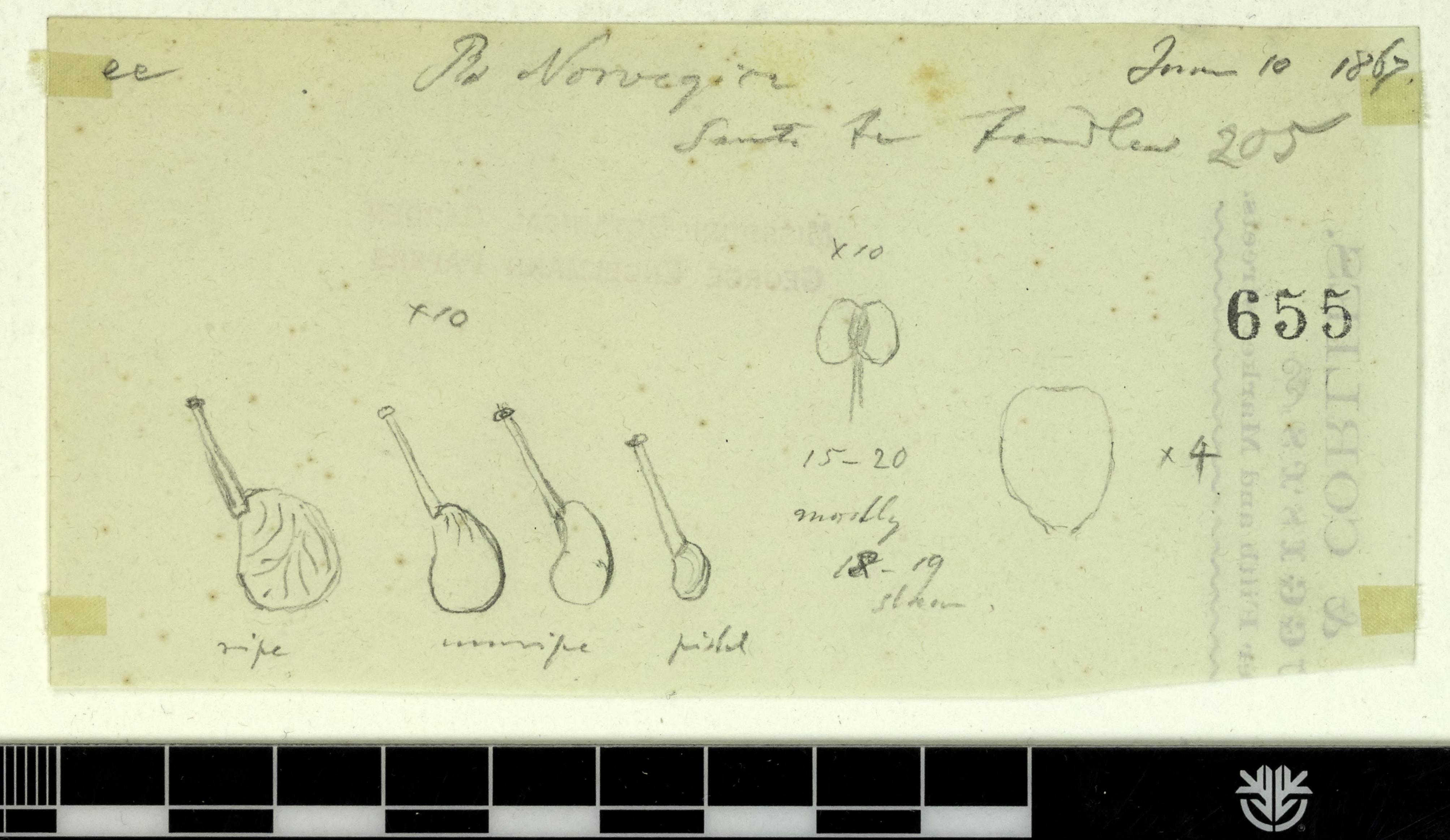






MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS

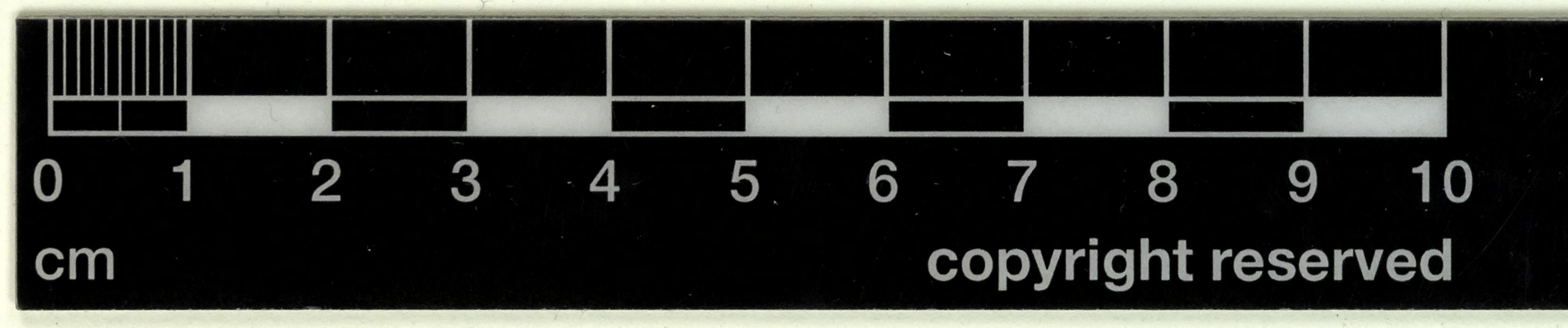




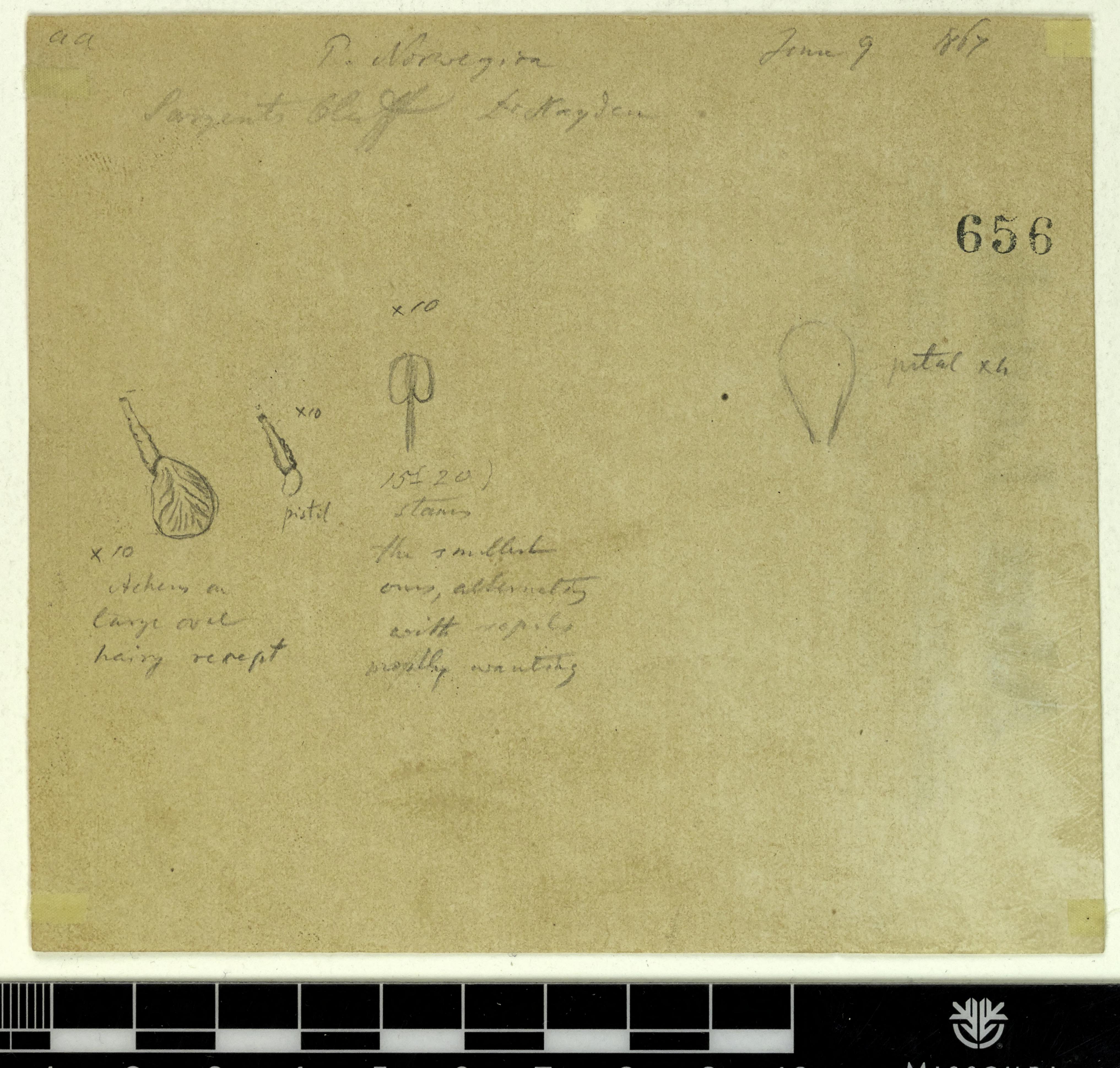


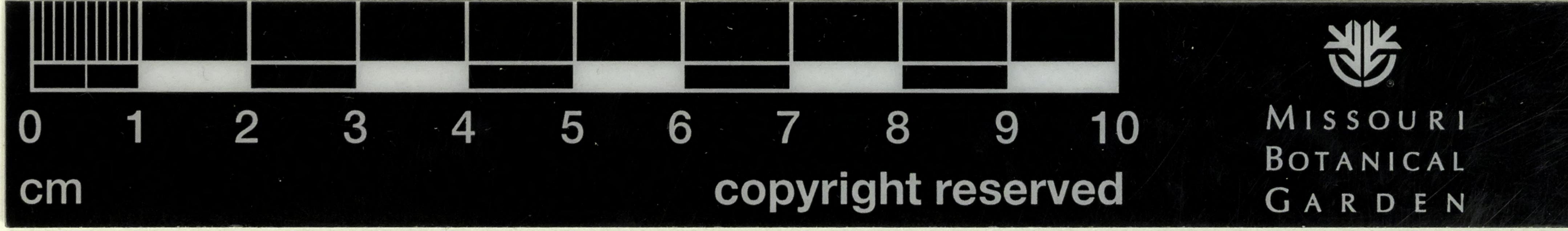
TGGXSLELLES,
TGGXSLES,
TGG

MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS









MISSOURI BOTANICAL CARDEN GEORGE ENGELMANN PAPERS



